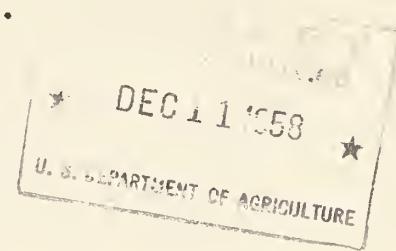


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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Cotton Division
Washington, D.C.



COTTON FIBER AND PROCESSING TEST RESULTS
CROP OF 1958

AMS-271
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COTTON FIBER AND PROCESSING TEST RESULTS

Some improvement was noted in the average yarn appearance grades in the Southeastern area as compared with the previous reports, and yarns spun from cottons in this area now compare favorably with the average yarn appearance index reported last year. For the crop as a whole, however, yarn grades continued to average considerably below those observed in 1957. Cotton Quality as reflected in average nonlint content and picker and card waste continued to show improvement over last year as these values are averaging almost one percentage point below those reported in 1957. Neps per 100 square inches of card web are averaging about the same as last year in the Western states but are considerably higher than in 1957 in other areas of the United States.

Results contained in this report include late season selections from Alabama and South Carolina; midseason selection from the South Central states; and a few scattered early and midseason samples from the Western states.

Southeastern Area. Late harvested cottons arriving from the Southwestern states are generally higher in fiber and spinning quality than last year. Yarn strength is averaging 117 pounds for 22s yarn this season as compared with an average of 111 pounds for 1957. Picker and card waste is much less than last year and yarn appearance grades are about the same. Average nep counts in the Southeast are higher than last year with a count of 21 neps per 100 square inches of card web as compared with 16 in 1957.

South Central Area. Cottons from the South Central states received thus far this year, are slightly finer and less mature than at this time last year. Yarn strength and yarn appearance grades are considerably lower this year with an average strength of 22s yarn of 108 and an appearance index of 94 as compared with a strength of 114 and an appearance index of 104 in 1957.

Southwestern Area. Southwestern cottons are averaging slightly above 1957 in fineness and maturity. Average picker and card waste and nonlint content are also below that of last year, reflecting the generally higher lint grades reported for this area. Strength of 22s yarn is down slightly from last year's average and the yarn appearance grades are considerably lower. Yarn appearance grades in the Southwest show an average index of 97 thus far this season as compared with an index of 105 in 1957.

Western Area. Samples received from the Western states thus far this season are averaging slightly lower in maturity, yarn strength, and yarn appearance grades than last year. Higher lint grades are indicated by slightly lower nonlint content and picker and card waste percentages than were reported in 1957 for this same period. Average fiber strength and nep count is on about the same level as last year.

Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 12-1/2 pounds per hour and a twist multiplier of 4.40, crop of 1958

Variety	Parrott	Western	Stormproof
State	Oklahoma	Oklahoma	Texas
Market area	Temple	Erick	Rotan
Percentage of variety at gin	80	80	80
Period of harvest	Late	Midseason	Midseason
RAW COTTON QUALITY			
Classification (official standards):			
Grade-----designation:	Mltsp	Mltsp	M
Staple length-----inches:	15/16	29/32	15/16
Fiber length (Fibrograph):			
Upper half mean-----inches:	.96	.90	.92
Uniformity-----ratio:	79	78	79
Fiber fineness and maturity:			
Micronaire-----reading <u>1</u> /:	4.8	4.2	5.2
Fineness (Causticaire)---ug/inch <u>2</u> /:	5.1	4.3	5.2
Maturity (")-----index:	78	79	81
Fiber tensile strength (Pressley):			
Zero gauge-----1,000 p.s.i.:	81	84	88
" " -----grams per tex <u>3</u> /:	40.1	41.6	43.6
1/8" " " " " :	21.8	19.6	21.4
Nonlint content: <u>4</u> /			
Visible waste-----percent:	1.5	1.3	1.2
Invisible waste-----" :	1.3	1.4	1.0
Total nonlint content-----" :	2.8	2.7	2.2
Color of raw cotton: <u>5</u> /			
Reflectance-----Rd:	73.5	73.0	74.4
Yellowness-----+b:	8.8	9.5	8.7
Sugar content-----percent:	0.2	0.2	0.0
Acid-alkaline value-----pH units <u>6</u> /:	7.1	7.0	7.9
PROCESSING RESULTS			
Manufacturing waste:			
Picker and card-----percent:	8.1	8.5	5.6
Neps-----per 100 sq. in. of card web:	9	12	6
Yarn skein strength:			
8s (73.8 tex)-----pounds:	324	300	335
22s (26.8 ")-----" :	101	93	102
Average break factor----- <u>7</u> /:	2407	2223	2462
Yarn appearance:			
8s (73.8 tex)-----grade:	B	C+	B+
22s (26.8 ")-----" :	B	C+	B
Average yarn appearance---index <u>8</u> /:	95	100	115

For footnotes see page 20.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958

Variety	Acala 4-42			
State	Arizona		California	
Market area	Queen Creek	Bakersfield	Chouchilla	Corcoran
Percentage of variety at gin:	55*	100	100	100
Period of harvest	Early	Midseason	Midseason	Midseason
RAW COTTON QUALITY	:	:	:	:
Classification (official standards):	:	:	:	:
Grade-----designation:	SIM	M	SM	M
Staple length-----inches:	1-1/16	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	1.07	1.05	1.04	1.06
Uniformity-----ratio:	80	80	81	80
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading <u>1</u> /:	4.6	4.4	4.8	4.6
Fineness (Causticaire)---ug/inch <u>2</u> /:	4.6	4.6	5.0	4.5
Maturity (")-----index:	80	78	80	81
Fiber tensile strength (Pressley):	:	:	:	:
Zero gauge-----1,000 p.s.i.:	92	87	95	89
" " -----grams per tex <u>3</u> /:	45.5	43.1	47.0	44.1
1/8" " " " " :	26.1	22.9	25.4	25.4
Nonlint content: <u>4</u> /	:	:	:	:
Visible waste-----percent:	1.9	1.1	1.2	1.8
Invisible waste-----" :	1.0	0.7	0.8	0.9
Total nonlint content-----" :	2.9	1.8	2.0	2.7
Color of raw cotton: <u>5</u> /	:	:	:	:
Reflectance-----Rd:	74.9	78.3	79.0	76.8
Yellowness-----+b:	8.5	7.8	8.1	7.8
Sugar content-----percent:	0.1	0.1	0.3	0.3
Acid-alkaline value-----pH units <u>6</u> /:	7.8	7.1	6.6	7.0
PROCESSING RESULTS	:	:	:	:
Manufacturing waste:	:	:	:	:
Picker and card-----percent:	7.1	6.7	5.8	7.4
Neps-----per 100 sq. in. of card web:	10	11	6	6
Yarn skein strength:	:	:	:	:
22s (26.8 tex)-----pounds:	131	122	137	129
50s (11.8 ")-----" :	47	43	49	47
Average break factor----- <u>7</u> /:	2616	2417	2732	2594
Yarn appearance:	:	:	:	:
22s (26.8 tex)-----grade:	C	C+	B	C+
50s (11.8 ")-----" :	D+	D+	C+	C
Average yarn appearance---index <u>8</u> /:	85	90	105	95

Continued on page 5

*Samples selected from one variety growers.

For footnotes see page 20.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	:	Acala 4-42	:	Acala WR-44	:	Arizona 44
State	:	California	:	Arizona	:	Arizona
Market area	:	Firebaugh	:	Woodville	:	Avra
Percentage of variety at gin:	100	:	100	:	45*	:
Period of harvest	:	Midseason	:	Midseason	:	Early
	:	:	:	:	:	
RAW COTTON QUALITY	:	:	:	:	:	
Classification (official standards):	:	:	:	:	:	
Grade-----designation:	M	:	M	:	M	:
Staple length-----inches:	1-1/16	:	1-1/16	:	1-3/32	:
Fiber length (Fibrograph):	:	:	:	:	:	
Upper half mean-----inches:	1.07	:	1.05	:	1.12	:
Uniformity-----ratio:	79	:	81	:	88	:
Fiber fineness and maturity:	:	:	:	:	:	
Micronaire-----reading 1/:	4.4	:	4.6	:	4.6	:
Fineness (Causticaire)---ug/inch 2/:	4.6	:	4.5	:	4.6	:
Maturity (")-----index:	78	:	81	:	80	:
Fiber tensile strength (Pressley):	:	:	:	:	:	
Zero gauge-----1,000 p.s.i.:	89	:	91	:	88	:
" " -----grams per tex 3/:	44.1	:	45.0	:	43.6	:
1/8" " " " " :	25.2	:	24.6	:	24.7	:
Nonlint content: 4/	:	:	:	:	:	
Visible waste-----percent:	2.1	:	1.3	:	1.3	:
Invisible waste-----" :	1.2	:	0.9	:	1.0	:
Total nonlint content-----" :	3.3	:	2.2	:	2.3	:
Color of raw cotton: 5/	:	:	:	:	:	
Reflectance-----Rd:	79.0	:	76.5	:	77.3	:
Yellowness-----+b:	7.9	:	7.6	:	7.9	:
	:	:	:	:	:	
Sugar content-----percent:	0.3	:	0.2	:	0.2	:
Acid-alkaline value-----pH units 6/:	6.5	:	7.2	:	7.6	:
	:	:	:	:	:	
PROCESSING RESULTS	:	:	:	:	:	
Manufacturing waste:	:	:	:	:	:	
Picker and card-----percent:	6.9	:	6.9	:	6.9	:
Neps-----per 100 sq. in. of card web:	13	:	7	:	18	:
Yarn skein strength:	:	:	:	:	:	
22s (26.8 tex)-----pounds:	130	:	129	:	122	:
50s (11.8 ")-----" :	46	:	46	:	43	:
Average break factor-----7/:	2580	:	2569	:	2417	:
Yarn appearance:	:	:	:	:	:	
22s (26.8 tex)-----grade:	C+	:	C+	:	C	:
50s (11.8 ")-----" :	C	:	C	:	D+	:
Average yarn appearance---index 8/:	95	:	95	:	85	:
	:	:	:	:	:	

Continued on page 6

*Samples selected from one variety growers.

For footnotes see page 20.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Arizona 44	Coker 100A		
State	Arizona	South Carolina		
Market area	Eloy	Horn	Pendleton	
Percentage of variety at gin	85	100	95	
Period of harvest	Early	Midseason	Midseason	Late
RAW COTTON QUALITY				
Classification (official standards):				
Grade-----designation:	SIM	SM	M	M
Staple length-----inches:	1-1/16	1-1/16	1-1/32	1-1/32
Fiber length (Fibrograph):				
Upper half mean-----inches:	1.04	1.07	1.04	1.05
Uniformity-----ratio:	77	79	83	84
Fiber fineness and maturity:				
Micronaire-----reading 1/:	4.2	4.6	4.8	4.8
Fineness (Causticaire)---ug/inch 2/:	4.3	4.2	4.8	4.6
Maturity (")-----index:	79	82	81	82
Fiber tensile strength (Pressley):				
Zero gauge-----1,000 p.s.i.:	88	96	81	80
" " -----grams per tex 3/:	43.6	47.5	40.3	39.7
1/8" " " " " :	24.1	26.2	21.9	21.8
Nonlint content: 4/				
Visible waste-----percent:	2.3	1.1	2.6	2.2
Invisible waste-----" :	0.9	1.0	0.7	0.9
Total nonlint content-----" :	2.2	2.1	3.3	3.1
Color of raw cotton: 5/				
Reflectance-----Rd:	72.4	78.3	76.7	72.5
Yellowness-----+b:	8.1	8.7	8.9	8.7
Sugar content-----percent:	0.2	0.0	0.2	0.2
Acid-alkaline value-----pH units 6/:	7.4	7.5	7.6	8.2
PROCESSING RESULTS				
Manufacturing waste:				
Picker and card-----percent:	8.1	6.7	7.6	7.6
Neps-----per 100 sq. in. of card web:	20	10	7	12
Yarn skein strength:				
22s (26.8 tex)-----pounds:	118	127	120	118
50s (11.8 ")-----" :	41	45	41	40
Average break factor-----7/:	2323	2522	2345	2298
Yarn appearance:				
22s (26.8 tex)-----grade:	C	C+	B+	B+
50s (11.8 ")-----" :	D	D+	B	B
Average yarn appearance-----index 8/:	80	90	115	115

Continued on page 7

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Coker 100 W			
State	Georgia	N. Carolina	South Carolina	
Market area	Bostnick	Monroe	Aiken	Chester
Percentage of variety at gin	95	95	85	100
Period of harvest	Late	Late	Late	Late
RAW COTTON QUALITY				
Classification (official standards):				
Grade-----designation:	SIM	SLM	M	M
Staple length-----inches:	1	1-1/16	31/32	1-1/32
Fiber length (Fibrograph):				
Upper half mean-----inches:	1.02	1.09	.94	1.01
Uniformity-----ratio:	81	80	79	83
Fiber fineness and maturity:				
Micronaire-----reading 1/:	4.2	4.1	4.1	4.4
Fineness (Causticaire)---ug/inch 2/:	4.2	4.1	4.2	4.4
Maturity (")-----index:	79	78	77	79
Fiber tensile strength (Pressley):				
Zero gauge-----1,000 p.s.i.:	84	77	85	82
" " -----grams per tex 3/:	41.7	37.9	42.2	40.5
1/8" " " " " :	20.5	22.0	20.2	22.2
Nonlint content: 4/				
Visible waste-----percent:	1.8	1.8	1.5	1.2
Invisible waste-----" :	0.9	0.2	1.3	0.7
Total nonlint content-----" :	2.7	2.0	2.8	1.9
Color of raw cotton: 5/				
Reflectance-----Rd:	75.3	75.2	74.8	73.5
Yellowness-----+b:	8.0	7.9	8.9	9.4
Sugar content-----percent:	0.1	0.2	0.1	0.2
Acid-alkaline value-----pH units 6/:	8.5	6.9	8.4	7.9
PROCESSING RESULTS				
Manufacturing waste:				
Picker and card-----percent:	8.1	7.8	6.8	5.0
Neps-----per 100 sq. in. of card web:	25	22	22	13
Yarn skein strength:				
22s (26.8 tex)-----pounds:	111	125	112	119
50s (11.8 ")-----" :	38	44	38	41
Average break factor-----7/:	2171	2475	2182	2334
Yarn appearance:				
22s (26.8 tex)-----grade:	C+	B	B	B
50s (11.8 ")-----" :	C	C+	C+	C+
Average yarn appearance-----index 8/:	95	105	105	105

Continued on page 8

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Coker 100 W			
State	South Carolina			
Market area	Garnett	Lamar	St. Matthews	Summerton
Percentage of variety	95	100	80	90
Period of harvest	Late	Late	Late	Late
RAW COTTON QUALITY				
Classification (official standards):				
Grade-----designation:	SIM	SIM	SIM	SIM
Staple length-----inches:	1-1/32	1-1/32	1-1/32	1-1/32
Fiber length (Fibrograph):				
Upper half mean-----inches:	1.00	1.02	1.05	1.04
Uniformity-----ratio:	75	81	82	81
Fiber fineness and maturity:				
Micronaire-----reading <u>1</u> /:	3.9	4.0	4.4	4.2
Fineness (Causticaire)---ug/inch <u>2</u> /:	4.1	4.2	4.4	4.2
Maturity (")-----index:	75	76	80	78
Fiber tensile strength (Pressley):				
Zero gauge-----1,000 p.s.i.:	80	75	82	75
" " -----grams per tex <u>3</u> /:	39.5	36.9	40.5	37.2
1/8" " " " " :	20.9	21.0	21.4	20.1
Nonlint content: <u>4</u> /				
Visible waste-----percent:	2.2	1.6	1.4	2.2
Invisible waste-----" :	0.6	0.5	0.8	0.7
Total nonlint content-----" :	2.8	2.1	2.2	2.9
Color of raw cotton: <u>5</u> /				
Reflectance-----Rd:	73.4	71.7	73.0	69.5
Yellowness-----+b:	8.7	8.1	8.8	8.4
Sugar content-----percent:	0.2	0.1	0.0	0.1
Acid-alkaline value-----pH units <u>6</u> /:	7.9	7.1	9.1	8.6
PROCESSING RESULTS				
Manufacturing waste:				
Picker and card-----percent:	7.9	6.7	6.4	7.3
Neps-----per 100 sq. in. of card web:	20	17	19	22
Yarn skein strength:				
22s (26.8 tex)-----pounds:	113	104	112	109
50s (11.8 ")-----" :	39	36	39	38
Average break factor----- <u>7</u> /:	2218	2044	2207	2149
Yarn appearance:				
22s (26.8 tex)-----grade:	C+	C+	B	C+
50s (11.8 ")-----" :	C+	C+	C+	C+
Average yarn appearance-----index <u>8</u> /:	100	100	105	100

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	:	Deltapine 15			
State	:	Arkansas			
Market area	:	Bradley	Lake Village	Marianna	McGehee
Percentage of variety at gin	:	95	100	97	98
Period of harvest	:	Midseason	Midseason	Midseason	Midseason
RAW COTTON QUALITY	:	:	:	:	:
Classification (official standards):	:	:	:	:	:
Grade-----designation:	M	M	M	SIM	
Staple length-----inches:	1-3/32	1-3/32	1-1/16	1-1/16	
Fiber length (Fibrograph):	:	:	:	:	
Upper half mean-----inches:	1.10	1.10	1.09	1.08	
Uniformity-----ratio:	79	80	81	80	
Fiber fineness and maturity:	:	:	:	:	
Micronaire-----reading <u>1</u> /:	4.7	4.7	4.6	4.6	
Fineness (Causticaire)---ug/inch <u>2</u> /:	4.7	4.9	4.8	4.8	
Maturity (")-----index:	80	79	77	79	
Fiber tensile strength (Pressley):	:	:	:	:	
Zero gauge-----1,000 p.s.i.:	81	81	77	81	
" " -----grams per tex <u>3</u> /:	40.1	40.1	38.1	40.1	
1/8" " " " " :	22.5	23.6	22.6	21.8	
Nonlint content: <u>4</u> /	:	:	:	:	
Visible waste-----percent:	1.9	1.7	1.5	2.4	
Invisible waste-----" :	1.2	1.1	1.0	1.2	
Total nonlint content-----" :	3.1	2.8	2.5	3.6	
Color of raw cotton: <u>5</u> /	:	:	:	:	
Reflectance-----Rd:	74.9	75.5	76.0	70.6	
Yellowness-----+b:	8.1	7.6	8.7	8.1	
Sugar content-----percent:	0.0	0.0	0.0	0.0	
Acid-alkaline value-----pH units <u>6</u> /:	7.6	7.4	6.9	7.3	
PROCESSING RESULTS	:	:	:	:	
Manufacturing waste:	:	:	:	:	
Picker and card-----percent:	7.9	7.2	5.8	8.5	
Neps-----per 100 sq. in. of card web:	13	7	8	5	
Yarn skein strength:	:	:	:	:	
22s (26.8 tex)-----pounds:	117	117	121	114	
50s (11.8 ")-----" :	40	40	43	40	
Average break factor----- <u>7</u> /:	2287	2287	2406	2254	
Yarn appearance:	:	:	:	:	
22s (26.8 tex)-----grade:	C	B	C+	C+	
50s (11.8 ")-----" :	D+	C+	C+	C+	
Average yarn appearance-----index <u>8</u> /:	85	105	100	100	

Continued on page 10

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Deltapine 15				
State	Arkansas		Louisiana		
Market area	Osceola	Parkdale	Bunkie	Cheneyville	
Percentage of variety at gin	98	98	98	98	99
Period of harvest	Midseason	Midseason	Late	Late	Late
RAW COTTON QUALITY					
Classification (official standards):					
Grade-----designation:	SIM	M	SIM	SIM	SIM
Staple length-----inches:	1-1/16	1-1/16	1-1/16	1-1/16	1-1/16
Fiber length (Fibrograph):					
Upper half mean-----inches:	1.08	1.09	1.07	1.07	1.04
Uniformity-----ratio:	78	77	76	76	71
Fiber fineness and maturity:					
Micronaire-----reading 1/:	4.1	4.5	4.6	4.6	4.4
Fineness (Causticaire)---ug/inch 2 :	4.4	4.6	4.5	4.5	4.3
Maturity (")-----index:	77	78	81	81	80
Fiber tensile strength (Pressley):					
Zero gauge-----1,000 p.s.i.:	78	79	74	74	74
" " -----grams per tex 3/:	38.6	39.1	36.6	36.6	36.6
1/8" " " " :	21.6	22.2	20.1	20.1	21.1
Nonlint content: 4/					
Visible waste-----percent:	2.1	0.9	1.4	1.4	1.2
Invisible waste-----" :	1.1	1.2	1.6	1.6	1.1
Total nonlint content -----" :	3.2	2.1	3.0	3.0	2.3
Color of raw cotton: 5/					
Reflectance-----Rd:	74.5	77.5	77.7	77.7	73.1
Yellowness-----+b:	7.8	8.1	7.6	7.6	7.9
" :					
Sugar content-----percent:	0.0	0.0	0.2	0.2	0.1
Acid-alkaline value-----pH units 6/:	7.4	7.4	7.5	7.5	7.2
" :					
PROCESSING RESULTS					
Manufacturing waste:					
Picker and card-----percent:	7.3	6.4	7.9	7.9	6.7
Neps-----per 100 sq. in. of card web:	13	5	11	11	14
Yarn skein strength:					
22s (26.8 tex)-----pounds:	116	118	104	104	106
50s (11.8 ")-----" :	40	41	36	36	36
Average break factor-----7/:	2276	2323	2044	2044	2066
Yarn appearance:					
22s (26.8 tex)-----grade:	C+	C+	C+	C+	C+
50s (11.8 ")-----" :	D+	C	C	C	D+
Average yarn appearance----index 8/:	90	95	95	95	90
" :					

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Deltapine 15				
State	Louisiana		Mississippi		
Market area	Gilbert	Natchitoches	Waterproof	Booneville	
Percentage of variety at gin:	99	100	94	95	
Period of harvest	Late	Late	Midseason	Late	
RAW COTTON QUALITY					
Classification (official standards):					
Grade-----designation:	SIMltsp	SIM	M	M	
Staple length-----inches:	1-1/16	1-1/32	1-1/16	1-1/16	
Fiber length (Fibrograph):					
Upper half mean-----inches:	1.08	1.04	1.08	1.04	
Uniformity-----ratio:	78	72	79	76	
Fiber fineness and maturity:					
Micronaire-----reading <u>1</u> /:	4.6	3.8	4.8	4.4	
Fineness (Causticaire)---ug/inch <u>2</u> /:	4.9	3.7	4.9	4.5	
Maturity (")-----index:	78	76	79	78	
Fiber tensile strength (Pressley):					
Zero gauge-----1,000 p.s.i.:	84	78	79	78	
" " -----grams per tex <u>3</u> /:	41.6	38.6	39.1	38.6	
1/8" " " " " :	20.7	21.2	20.6	21.1	
Nonlint content: <u>4</u> /					
Visible waste-----percent:	2.1	1.9	0.9	1.0	
Invisible waste-----" :	1.5	1.8	1.1	1.2	
Total nonlint content-----" :	3.6	3.7	2.0	2.2	
Color of raw cotton: <u>5</u> /					
Reflectance-----Rd:	68.5	73.0	77.5	76.1	
Yellowness-----+b:	8.4	7.5	8.1	8.7	
Sugar content-----percent:	0.0	0.0	0.1	0.2	
Acid-alkaline value-----pH units <u>6</u> /:	7.4	7.5	7.5	6.9	
PROCESSING RESULTS					
Manufacturing waste:					
Picker and card-----percent:	9.2	8.9	6.4	6.4	
Neps-----per 100 sq. in. of card web:	10	22	7	9	
Yarn skein strength:					
22s (26.8 tex)-----pounds:	103	104	107	116	
50s (11.8 ")-----" :	35	36	36	30	
Average break factor----- <u>7</u> /:	2008	2044	2077	2251	
Yarn appearance:					
22s (26.8 tex)-----grade:	C	C	C+	C+	
50s (11.8 ")-----" :	D+	D	C	C	
Average yarn appearance---index <u>8</u> /:	95	80	95	95	

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	:	Deltapine 15			
State	:	Mississippi			
Market area	:	Clarksdale	Greenville	Fayette	Ruleville
Percentage of variety at gin	:	100	100	100	100
Period of harvest	:	Midseason	Midseason	Late	Midseason
	:	:	:	:	:
RAW COTTON QUALITY	:	:	:	:	:
Classification (official standards):	:	:	:	:	:
Grade-----designation:	SLM	:	SLM	:	SLM 1tsp:
Staple length-----inches:	1-3/32	:	1-1/16	:	1-1/32 :
Fiber length (Fibrograph):	:	:	:	:	:
Upper half mean-----inches:	1.09	:	1.09	:	1.00 :
Uniformity-----ratio:	82	:	75	:	74 :
Fiber fineness and maturity:	:	:	:	:	:
Micronaire-----reading 1/:	3.9	:	4.0	:	4.9 :
Fineness (Causticaire)---ug/inch 2/:	4.1	:	4.1	:	5.0 :
Maturity (")-----index:	75	:	75	:	80 :
Fiber tensile strength (Pressley):	:	:	:	:	:
Zero gauge-----1,000 p.s.i.:	77	:	79	:	73 :
" " -----grams per tex 3/:	38.1	:	39.1	:	36.1 :
1/8" " " " " :	23.5	:	22.5	:	18.9 :
Nonlint content: 4/	:	:	:	:	:
Visible waste-----percent:	2.2	:	2.2	:	1.3 :
Invisible waste-----" :	1.1	:	1.1	:	2.0 :
Total nonlint content-----" :	3.3	:	3.3	:	3.3 :
Color of raw cotton: 5/	:	:	:	:	:
Reflectance-----Rd:	74.5	:	72.5	:	68.3 :
Yellowness-----+b:	7.6	:	7.5	:	8.9 :
	:	:	:	:	:
Sugar content-----percent:	0.0	:	0.1	:	0.0 :
Acid-alkaline value-----pH units 6/:	6.8	:	6.7	:	8.0 :
	:	:	:	:	:
PROCESSING RESULTS	:	:	:	:	:
Manufacturing waste:	:	:	:	:	:
Picker and card-----percent:	7.1	:	7.8	:	10.1 :
Neps-----per 100 sq. in. of card web:	16	:	14	:	6 :
Yarn skein strength:	:	:	:	:	:
22s (26.8 tex)-----pounds:	120	:	120	:	88 :
50s (11.8 ")-----" :	42	:	41	:	30 :
Average break factor-----7/:	2370	:	2345	:	1718 :
Yarn appearance:	:	:	:	:	:
22s (26.8 tex)-----grade:	C+	:	C+	:	C :
50s (11.8 ")-----" :	D+	:	D+	:	D :
Average yarn appearance-----index 8/:	90	:	90	:	95 :
	:	:	:	:	:

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*Cotton stuck slightly to manufacturing rolls during processing.

For footnotes see page 20.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Deltapine 15				
State	Oklahoma	Tennessee			
Market area	Webber Falls	Brownsville	Dyersburg	Jackson	
Percentage of variety at gin	95	96	95	90	
Period of harvest	Late	Late	Late	Late	
RAW COTTON QUALITY					
Classification (official standards):					
Grade-----designation:	LM+	M	M	M	M
Staple length-----inches:	1-1/32	1-1/16	1-1/16	1-1/16	1-1/32
Fiber length (Fibrograph):					
Upper half mean-----inches:	1.06	1.06	1.08	1.01	
Uniformity-----ratio:	79	80	76	83	
Fiber fineness and maturity:					
Micronaire-----reading 1/:	4.3	4.0	4.0	4.2	
Fineness (Causticaire)---ug/inch 2/:	4.6	4.2	3.8	4.2	
Maturity (")-----index:	76	77	78	78	
Fiber tensile strength (Pressley):					
Zero gauge-----1,000 p.s.i.:	81	82	80	79	
" " -----grams per tex 3/:	40.1	40.6	39.6	39.1	
1/8" " " " " :	22.6	21.4	22.7	21.3	
Nonlint content: 4/					
Visible waste-----percent:	3.3	0.8	0.8	1.5	
Invisible waste-----" :	1.0	0.9	0.8	1.0	
Total nonlint content-----" :	4.3	1.7	1.6	2.5	
Color of raw cotton: 5/					
Reflectance-----Rd:	73.5	79.6	78.4	78.5	
Yellowness-----+b:	7.5	7.7	7.6	8.1	
Sugar content-----percent:	0.0	0.3	0.2	0.3	
Acid-alkaline value-----pH units 6/:	7.4	6.7	6.6	6.7	
PROCESSING RESULTS					
Manufacturing waste:					
Picker and card-----percent:	8.8	6.6	5.9	7.0	
Neps-----per 100 sq. in. of card web:	9	11	13	11	
Yarn skein strength:					
22s (26.8 tex)-----pounds:	126	118	123	112	
50s (11.8 ")-----" :	44	41	43	39	
Average break factor-----7/:	2486	2323	2428	2207	
Yarn appearance:					
22s (26.8 tex)-----grade:	C+	C+	C	C+	
50s (11.8 ")-----" :	C	C	C+	C	
Average yarn appearance-----index 8/:			85		

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Deltapine 15	Deltapine Fox	Empire
State	Texas	Arkansas	Alabama
Market area	Batesville	Earle	Pisgah
Percentage of variety at gin	90	75	98
Period of harvest	Late	Late	Midseason
	:	:	:
RAW COTTON QUALITY	:	:	:
Classification (official standards):	:	:	:
Grade-----designation:	LM	M	M
Staple length-----inches:	1	1-1/16	1-1/16
Fiber length (Fibrograph):	:	:	:
Upper half mean-----inches:	1.03	1.08	1.08
Uniformity-----ratio:	74	77	83
Fiber fineness and maturity:	:	:	:
Micronaire-----reading 1/:	4.6	4.5	3.8
Fineness (Causticaire)--ug/inch 2/:	4.5	4.7	4.0
Maturity (")-----index:	80	78	74
Fiber tensile strength (Pressley):	:	:	:
Zero gauge-----1,000 p.s.i.:	76	80	82
" " -----grams per tex 3/:	37.6	39.6	40.0
1/8" " " " " :	21.0	22.9	21.8
Nonlint content: 4/	:	:	:
Visible waste-----percent:	1.7	1.4	1.3
Invisible waste-----" :	1.2	0.8	0.5
Total nonlint content-----" :	2.9	2.2	1.8
Color of raw cotton: 5/	:	:	:
Reflectance -----Rd:	71.5	77.8	78.2
Yellowness-----+b:	7.2	8.5	8.0
	:	:	:
Sugar content-----percent:	0.0	0.2	0.3
Acid-alkaline value----pH units 6/:	9.1	6.9	6.5
	:	:	:
PROCESSING RESULTS	:	:	:
Manufacturing waste:	:	:	:
Picker and card-----percent:	7.7	6.8	5.9
Neps-----per 100 sq. in. of card web:	12	12	13
Yarn skein strength:	:	:	:
22s (26.8 tex)-----pounds:	107	116	123
50s (11.8 ")-----" :	37	41	43
Average break factor-----7/:	2102	2301	2428
Yarn appearance:	:	:	:
22s (26.8 tex)-----grade:	C+	C+	B
50s (11.8 ")-----" :	C	C	C+
Average yarn appearance---index 8/:	90	95	105
	:	:	:

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4,00, crop of 1958--Continued

Variety	:	Empire		Lankart
State	:	Arkansas	Tennessee	Texas
Market area	:	Walnut Ridge	Fayetteville	Bonnam
Percentage of variety at gin	:	75	85	99
Period of harvest	:	Midseason	Late	Late
	:	:	:	
RAW COTTON QUALITY	:	:	:	
Classification (official standards):	:	:	:	
Grade-----designation:	M	:	SM	SLM
Staple length-----inches:	1-1/16	:	1-1/16	31/32
Fiber length (Fibrograph):	:	:	:	
Upper half mean-----inches:	1.07	:	1.05	.98
Uniformity-----ratio:	79	:	79	79
Fiber fineness and maturity:	:	:	:	
Micronaire-----reading 1/:	4.2	:	4.0	4.8
Fineness (Causticaire)---ug/inch 2/:	4.2	:	4.3	5.1
Maturity (")-----index:	78	:	76	79
Fiber tensile strength (Pressley):	:	:	:	
Zero gauge-----1,000 p.s.i:	80	:	83	85
" " -----grams per tex 3/:	39.6	:	41.1	42.1
1/8" " " " " :	20.5	:	22.6	20.4
Nonlint content: 4/	:	:	:	
Visible waste-----percent:	1.1	:	0.8	3.1
Invisible waste-----" :	1.1	:	0.7	1.1
Total nonlint content-----" :	2.2	:	1.5	4.2
Color of raw cotton: 5/	:	:	:	
Reflectance-----Rd:	76.1	:	77.5	71.7
Yellowness-----+b:	8.4	:	7.9	8.5
	:	:	:	
Sugar content-----percent:	0.1	:	0.3	0.0
Acid-alkaline value-----pH units 6/:	7.7	:	6.8	7.8
	:	:	:	
PROCESSING RESULTS	:	:	:	
Manufacturing waste:	:	:	:	
Picker and card-----percent:	6.6	:	5.8	9.4
Neps-----per 100 sq. in. of card web:	9	:	9	7
Yarn skein strength:	:	:	:	
22s (26.8 tex)-----pounds:	113	:	118	105
50s (16.8 ")-----" :	39	:	41	35
Average break factor-----7/:	2218	:	2323	2030
Yarn appearance:	:	:	:	
22s (26.8 tex)-----grade:	C	:	B	C+
50s (11.8 ")-----" :	C	:	C+	C
Average yarn appearance---index 8/:	90	:	105	95
	:	:	:	

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Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

Variety	Deltapine 15:Northern Star: Plains : Rex				
State	Alabama	Oklahoma	Alabama	Arkansas	
Market area	Tuscaloosa	Altus	Centre	Parkin	
Percentage of variety at gin:	95	60	100	100	
Period of harvest	Midseason	Midseason	Late	Midseason	
RAW COTTON QUALITY					
Classification (official standards):					
Grade-----designation:	SIM	SIM	M	M	
Staple length-----inches:	1-1/32	1-1/32	1-1/32	1-1/16	
Fiber length (Fibrograph):					
Upper half mean-----inches:	1.06	1.01	1.03	1.07	
Uniformity-----ratio:	82	77	83	79	
Fiber fineness and maturity:					
Micronaire-----reading 1/:	4.2	4.4	4.1	4.6	
Fineness (Causticaire)---ug/inch 2/:	4.2	4.4	4.1	4.8	
Maturity (")-----index:	78	80	78	78	
Fiber tensile strength (Pressley):					
Zero gauge-----1,000 p.s.i.:	81	79	78	83	
" " -----grams per tex 3/:	40.3	39.1	38.7	41.1	
1/8" " " " " :	20.3	21.1	20.9	21.5	
Nonlint content: 4/					
Visible waste-----percent:	2.6	3.0	2.1	1.3	
Invisible waste-----" :	1.1	1.0	0.7	0.9	
Total nonlint content-----" :	3.7	4.0	2.8	2.2	
Color of raw cotton: 5/					
Reflectance-----Rd:	72.5	74.5	76.3	75.6	
Yellowness-----+b:	8.6	8.1	8.1	8.1	
Sugar content-----percent:	0.1	0.1	0.1	0.0	
Acid-alkaline value-----pH units 6/:	8.3	7.5	7.7	7.3	
PROCESSING RESULTS					
Manufacturing waste:					
Picker and card-----percent:	8.9	8.3	7.2	6.8	
Neps-----per 100 sq. in. of card web:	16	8	21	9	
Yarn skein strength:					
22s (26.8 tex)-----pounds:	112	111	117	113	
50s (11.8 ")-----" :	38	37	40	39	
Average break factor-----7/:	2182	2146	2287	2218	
Yarn appearance:					
22s (26.8 tex)-----grade:	B	C+	B	C+	
50s (11.8 ")-----" :	C+	C+	C+	C	
Average yarn appearance--index 8/:	105	100	105	95	

For footnotes see page 20.

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 6-1/2 pounds per hour and a twist multiplier of 3.80, crop of 1958

Variety	Acala 1517C		Acala 4-42		Delfos 9169
State	Arizona	Texas	California	Arkansas	
Market area	Safford	Stanton	Fresno	Black Oak	
Percentage of variety at gin	80	80*	100	100	
Period of harvest	Midseason	Midseason	Midseason	Midseason	
RAW COTTON QUALITY	:	:	:	:	
Classification (official standards):	:	:	:	:	
Grade-----designation:	M	M	M	M	
Staple length-----inches:	1-1/8	1-1/8	1-1/16	1-3/32	
Fiber length (Fibrograph):	:	:	:	:	
Upper half mean-----inches:	1.11	1.11	1.04	1.10	
Uniformity-----ratio:	77	83	81	75	
Fiber fineness and maturity:	:	:	:	:	
Micronaire-----reading <u>1</u> /:	4.1	4.5	4.7	3.6	
Fineness (Causticaire)---ug/inch <u>2</u> /:	4.1	4.3	4.6	3.8	
Maturity (")-----index:	78	80	81	72	
Fiber tensile strength (Pressley):	:	:	:	:	
Zero gauge-----1,000 p.s.i.:	91	83	91	76	
" " -----grams per tex <u>3</u> /:	44.9	41.1	45.0	37.7	
1/8" " -----" " " :	25.6	25.0	25.8	20.9	
Nonlint content: <u>4</u> /	:	:	:	:	
Visible waste-----percent:	1.2	1.2	1.9	1.4	
Invisible waste-----" :	0.5	0.8	0.5	1.1	
Total nonlint content-----" :	1.7	2.0	2.4	2.5	
Color of raw cotton: <u>5</u> /	:	:	:	:	
Reflectance-----Rd:	77.5	74.3	77.4	78.3	
Yellowness-----+b:	8.3	7.6	8.4	7.5	
Sugar content-----percent:	0.2	0.1	0.3	0.2	
Acid-alkaline value-----pH units <u>6</u> /:	7.2	8.7	6.6	7.1	
PROCESSING RESULTS	:	:	:	:	
Manufacturing waste:	:	:	:	:	
Picker and card-----percent:	7.5	8.4	8.4	9.4	
Comber-----" :	13.4	12.1	13.2	16.3	
Neps-----per 100 sq. in. of card web:	20	11	16	23	
Yarn skein strength:	:	:	:	:	
22s (26.8 tex)-----pounds:	139(153):	138(149):	137(150):	115(130)	
50s (11.8 ")-----" :	50(54):	48(52):	48(54):	40(45)	
Average break factor----- <u>7</u> /:	2779(3033):	2718(2939):	2707(3000):	2265(2555)	
Yarn appearance:	:	:	:	:	
22s (26.8 tex)-----grade:	C+ (C+):	B+ (B+):	C+ (B):	C+ (C+)	
50s (11.8 ")-----" :	C (C+):	B (B+):	C+ (C+):	C (C)	
Average yarn appearance-----index <u>8</u> /:	95 (100):	115 (120):	100 (105):	95 (95)	

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* 50% Acala 1517C and 50% Acala 1517BR.

For footnotes see page 20.

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 6-1/2 pounds per hour and a twist multiplier of 3.80, crop of 1958--Continued

Variety	Delfos 9169		Deltapine 15	
State	Arkansas	Mississippi	Arkansas	Mississippi
Market area	Pickins	Bolzoni	Leachville	Tunica
Percentage of variety at gin:	100	95	100	100
Period of harvest	Midseason	Midseason	Midseason	Midseason
	:	:	:	:
RAW COTTON QUALITY				
Classification (official standards):				
Grade-----designation:	SIM	M	SIM	SIM
Staple length-----inches:	1-3/32	1-3/32	1-3/32	1-1/16
Fiber length (Fibrograph):				
Upper half mean-----inches:	1.12	1.09	1.09	1.04
Uniformity-----ratio:	73	73	81	73
Fiber fineness and maturity:				
Micronaire-----reading 1/:	4.2	4.1	4.0	3.5
Fineness (Causticaire)---ug/inch 2/:	4.5	4.3	4.0	3.6
Maturity (")-----index:	77	77	77	73
Fiber tensile strength (Pressley):				
Zero gauge-----1,000 p.s.i.:	76	73	79	76
" " -----grams per tex 3/:	37.5	36.3	39.1	37.8
1/8" " " " :	21.1	20.6	22.6	21.8
Nonlint content: 4/				
Visible waste-----percent:	1.4	1.4	2.4	1.6
Invisible waste-----" :	0.9	0.7	1.1	0.9
Total nonlint content-----" :	2.3	2.1	3.5	2.5
Color of raw cotton: 5/				
Reflectance-----Rd:	72.5	76.0	74.1	75.4
Yellowness-----+b:	8.0	8.0	7.9	7.9
Sugar content-----percent:	0.1	0.2	0.2	0.1
Acid-alkaline value-----pH units 6/:	7.4	7.2	6.9	6.3
PROCESSING RESULTS				
Manufacturing waste:				
Picker and card-----percent:	9.6	7.9	8.8	10.0
Comber-----" :	15.4	15.7	14.1	15.7
Neps-----per 100 sq. in. of card web:	20	29	16	36
Yarn skein strength:				
22s (26.8 tex)-----pounds:	111(123)	113(126)	126(138)	120(134)
50s (11.8 ")-----" :	39(43)	39(44)	44(48)	43(47)
Average break factor-----7/:	2196(2428)	2218(2486)	2486(2718)	2395(2649)
Yarn appearance:				
22s (26.8 tex)-----grade:	C+ (B)	C+ (B)	C+ (B)	C (C)
50s (11.8 ")-----" :	C+ (C+)	C (C+)	C+ (C+)	D (C)
Average yarn appearance---index 8/:	100 (105)	95 (105)	100 (105)	80 (90)
	:	:	:	:

Table 4.--Results of classification, fiber tests, and combed yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 4-1/2 pounds per hour and a twist multiplier of 3.60, crop of 1958

Variety	:	Pima S-1		
State	:	Arizona		: New Mexico
Market area	:	Safford	: Stanfield	: Mesilla Park
Percentage of variety at gin	:	100	: 100	: 95
Period of harvest	:	Early	: Early	: Early
	:	:	:	:
RAW COTTON QUALITY	:	:	:	:
Classification (official standards):	:	:	:	:
Grade-----designation:	3	:	3	:
Staple length-----inches:	1-7/16	:	1-7/16	:
Fiber length (array)	:	:	:	:
Upper quartile-----inches:	1.40	:	1.41	:
Coefficient of variability--percent:	27	:	27	:
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading 1/:	3.8	:	3.8	:
Fineness (Causticaire)---ug/inch 2/:	3.3	:	3.2	:
Maturity (")-----index:	80	:	81	:
Fiber tensile strength (Pressley):	:	:	:	:
Zero gauge-----1,000 p.s.i.:	96	:	94	:
" " -----grams per tex 3/:	47.4	:	46.3	:
1/8" " " " " :	33.4	:	34.1	:
Nonlint content: 4/	:	:	:	:
Visible waste-----percent:	1.4	:	1.7	:
Invisible waste-----" :	1.0	:	0.9	:
Total nonlint content-----" :	2.4	:	2.6	:
Color of raw cotton: 5/	:	:	:	:
Reflectance-----Rd:	67.5	:	70.5	:
Yellowness-----+b:	10.8	:	10.3	:
	:	:	:	:
Sugar content-----percent:	0.2	:	0.1	:
Acid-alkaline value-----pH units 6/:	6.8	:	6.8	:
	:	:	:	:
PROCESSING RESULTS	:	:	:	:
Manufacturing waste:	:	:	:	:
Picker and card-----percent:	9.2	:	9.7	:
Comber-----" :	12.7	:	13.7	:
Neps-----per 100 sq. in. of card web:	10	:	7	:
Yarn skein strength:	:	:	:	:
50s (11.8 tex)-----pounds:	71	:	73	:
80s (7.4 ")-----" :	39	:	41	:
Average break factor-----7/:	3335	:	3465	:
Yarn appearance:	:	:	:	:
50s (11.8 tex)-----grade:	B+	:	B	:
80s (7.4 ")-----" :	B	:	B	:
Average yarn appearance-----index 8/:	115	:	110	:
	:	:	:	:

FOOTNOTES

- 1/ Fiber fineness and maturity in combination as measured on untreated samples using the curvilinear scale for upland cotton.
- 2/ Fineness and maturity as determined by the Causticaire method using the Micronaire instrument.
- 3/ Tex is the universal unit for designating linear density of textile materials as adopted by the International Standards Organization (ISO). A tex unit equals the weight in grams of 1,000 meters of the material.
- 4/ As determined by means of the Shirley Analyzer.
- 5/ Determined by the Nickerson-Hunter Colorimeter on raw stock. Rd values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.
- 6/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation due to weathering or from the action of micro-organisms.
- 7/ Based on yarn skein strength (number x strength) of the two yarn numbers spun.
- 8/ Based on two numbers spun. Index of average quality equals 100.

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON 25, D. C.

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